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WHAT IS CLAIMED IS:

- 1 1. An elongated member configured for advancement within a body lumen which is formed at least in part of cold worked biocompatible alloy consisting essentially of about 28 to about 65% cobalt, about 2 to about 40% nickel, about 5 to about 35% chromium, up to about 12% molybdenum, up to about 20% tungsten, up to about 20% iron and the balance inconsequential amounts of other alloying constituents.
- 1 2. The elongated member of claim 1 wherein the cold worked biocompatible alloy includes about 30 to about 45% cobalt, about 25 to about 37% nickel, about 15 to about 25% chromium and about 5 to about 15% molybdenum.
- 1 3. The elongated member of claim 2 wherein the cold worked biocompatible alloy has been age hardened.
- 1 4. The elongated member of claim 1 in the form of a guidewire.
- 1 5. The elongated member of claim 1 wherein a distal portion thereof is formed of a pseudoelastic NiTi alloy.

1 6. A composite product comprising:
2 a) a first portion formed of a high strength alloy containing
3 cobalt, nickel and chromium; and
4 b) a second portion formed of an alloy of nickel and
5 titanium.

1 7. The composite product of claim 6 wherein the first portion has
2 an ultimate tensile strength of at least 200 ksi and an elongation of at least
3 10%.

1 8. The composite product of claim 6 wherein the second portion
2 exhibits a stress induced transformation from an austenite phase which is
3 stable at body temperature to a martensite phase.

1 9. The composite product of claim 6 having an elongated shape
2 with the second portion being an elongated inner member and the first
3 portion being an outer sheath disposed about the inner member.

1 10. The composite product of claim 9 wherein the composite
2 product has proximal and distal sections and has at least a portion of the

3 outer sheath removed from the inner member in at least part of the distal
4 section.

1 11. The composite product of claim 10 wherein the inner member in
2 the distal section tapers in the distal direction to a smaller transverse
3 dimension.

1 12. A co-worked high strength elongated composite intracorporeal
2 device comprising:

- 3 a) a first member formed of a pseudoelastic NiTi alloy which
4 has desirable mechanical properties due to having been subjected to
5 certain thermomechanical processing; and
- 6 b) a second member secured to the first member formed of
7 a high strength Co-Ni-Cr alloy which has desirable mechanical
8 properties due to having been subjected to the same
9 thermomechanical processing to which the first member has been
10 subjected.

1 13. The intracorporeal device of claim 12 wherein the high strength
2 Co-Ni-Cr alloy consists essentially of about 28 to about 65% cobalt, about 2

3 to about 40% nickel, about 5 to about 35% chromium, up to about 12%
4 molybdenum, up to about 20% tungsten, up to about 20% iron and the
5 balance inconsequential amounts of other alloying constituents and
6 impurities.

1 14. The intracorporeal device of claim 12 wherein the
2 thermomechanical processing includes a plurality of cold working stages with
3 intermediate anneals and a final cold working stage followed by an age
4 hardening heat treatment.

1 15. An elongated guidewire for intracorporeal use comprising:

2 a) a core member having

3 an inner portion formed of a pseudoelastic NiTi

4 alloy; and

5 an outer portion formed of a high strength Co-Ni-Cr

6 alloy; and

7 b) a helical coil disposed about a distal portion of the core

8 member.

1 16. The elongated guidewire of claim 15 having proximal and distal
2 sections with a length of the outer portion removed to expose the underlying
3 inner portion in the distal section of the guidewire.

1 17. The elongated guidewire of claim 16 wherein the helical coil is
2 disposed about the exposed portion of the core member.

1 18. The elongated guidewire of claim 17 wherein the helical coil is
2 secured by its proximal portion to the outer portion of the core member.

1 19. The elongated guidewire of claim 18 wherein a shapeable
2 ribbon having proximal and distal ends is secured by its distal end to the
3 distal end of the coil and by its proximal end to the core member.

1 20. The elongated guidewire of claim 18 wherein the helical coil is
2 secured by its distal end to the core member.

1 21. The elongated guidewire of claim 15 wherein the Co-Ni-Cr alloy
2 consists essentially of about 28 to about 65% cobalt, about 2 to about 40%
3 nickel, about 5 to about 35% chromium, up to about 12% molybdenum, up

4 to about 20% tungsten, up to about 20% iron and the balance
5 inconsequential amounts of other alloying constituents and impurities.

1 22. The elongated guidewire of claim 21 wherein the Co-Ni-Cr alloy
2 includes about 30 to about 45% cobalt, about 25 to about 37% nickel,
3 about 15 to about 25% chromium and about 5 to about 15% molybdenum.

1 23. The elongated guidewire of claim 15 wherein the Ni-Ti alloy
2 consists essentially of about 25 to about 47% (atomic) titanium and the
3 balance nickel and up to about 10% of one or more additional alloying
4 elements.

1 24. The elongated guidewire of claim 23 wherein the additional
2 alloying elements are selected from the group consisting of up to 3% (each)
3 of iron, cobalt, chromium, platinum and palladium and up to about 10%
4 (total), copper and vanadium.

1 25. A method of making an elongated composite product
2 comprising:

- 3 a) providing an elongated outer sheath formed of a Co-Ni-Cr
4 alloy with an inner lumen extending therein;
5 b) advancing an elongated core member formed of NiTi alloy
6 into the inner lumen of the outer sheath to form an assembly
7 therewith; and
8 c) cold working the assembly in a plurality of cold working
9 stages and intermediate annealing the cold worked assembly between
10 cold working stages.

1 26. The method of claim 25 wherein the outer sheath is formed of
2 an alloy containing up to 10% molybdenum.

1 27. The method of claim 25 wherein the assembly is cold worked
2 by drawing with a reduction of at least about 20% in each cold working
3 stage.

1 28. The method of claim 25 wherein the cold worked assembly is
2 intermediate annealed at a temperature of about 600° and 900° C.

1 29. The method of claim 27 wherein the final cold working stage
2 includes a reduction of at least 50%.

1 30. The method of claim 26 wherein the cold worked assembly is
2 heat treated after the final cold working stage at a temperature between
3 about 400° and about 700°C. to age harden the outer sheath formed of Co-
4 Ni-Cr-Mo alloy and provide pseudoelastic characteristics to the inner
5 member.

1 31. The method of claim 26 wherein the cold worked assembly is
2 heat treated at a temperature between about 550° and about 675°C. to age
3 harden the outer sheath formed of Co-Ni-Cr-Mo alloy and provide
4 pseudoelastic characteristics to the inner member.

1 32. An expandable intracorporeal stent having a generally thin
2 walled cylindrical shape and being formed of an alloy consisting essentially
3 of about 28 to about 65% cobalt, about 2 to about 40% nickel, about 5 to
4 about 35% chromium, up to about 12% molybdenum, up to about 20%
5 tungsten, up to about 20% iron and the balance inconsequential amounts of
6 impurities and other alloying constituents.

1 33. The expandable intracorporeal stent of claim 32 wherein the
2 alloy includes about 30 to about 45% cobalt, about 25 to about 37% nickel,
3 about 15 to about 25% chromium and about 5 to about 15% molybdenum.

1 34. The expandable intracorporeal stent of claim 33 in an age
2 hardened condition.

1 35. An expandable intracorporeal stent having a generally thin
2 walled cylindrical shape and formed of an alloy exhibiting an ultimate tensile
3 strength greater than 300 ksi.

1 36. The expandable intracorporeal stent of claim 35 wherein the
2 alloy consists essentially of about 30 to about 45% cobalt, about 25 to
3 about 37% nickel, about 15 to about 25% chromium and about 5 to about
4 15% molybdenum with inconsequential amounts of other alloying
5 constituents and impurities.